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Commercial

Refrigerator & Freezer

Service Manual

2009

TOP MOUNT REACH-IN

Model No: UMTM-23

UMTM-47

UMTM-66

UMTM-23F

UMTM-47F

UMTM-66F

UMTM-47DRF

US Refrigeration
6890 Distribution Drive
Beltsville, Maryland 20705
(888) 556-2112
www.us-refrig.com

10/27/2009

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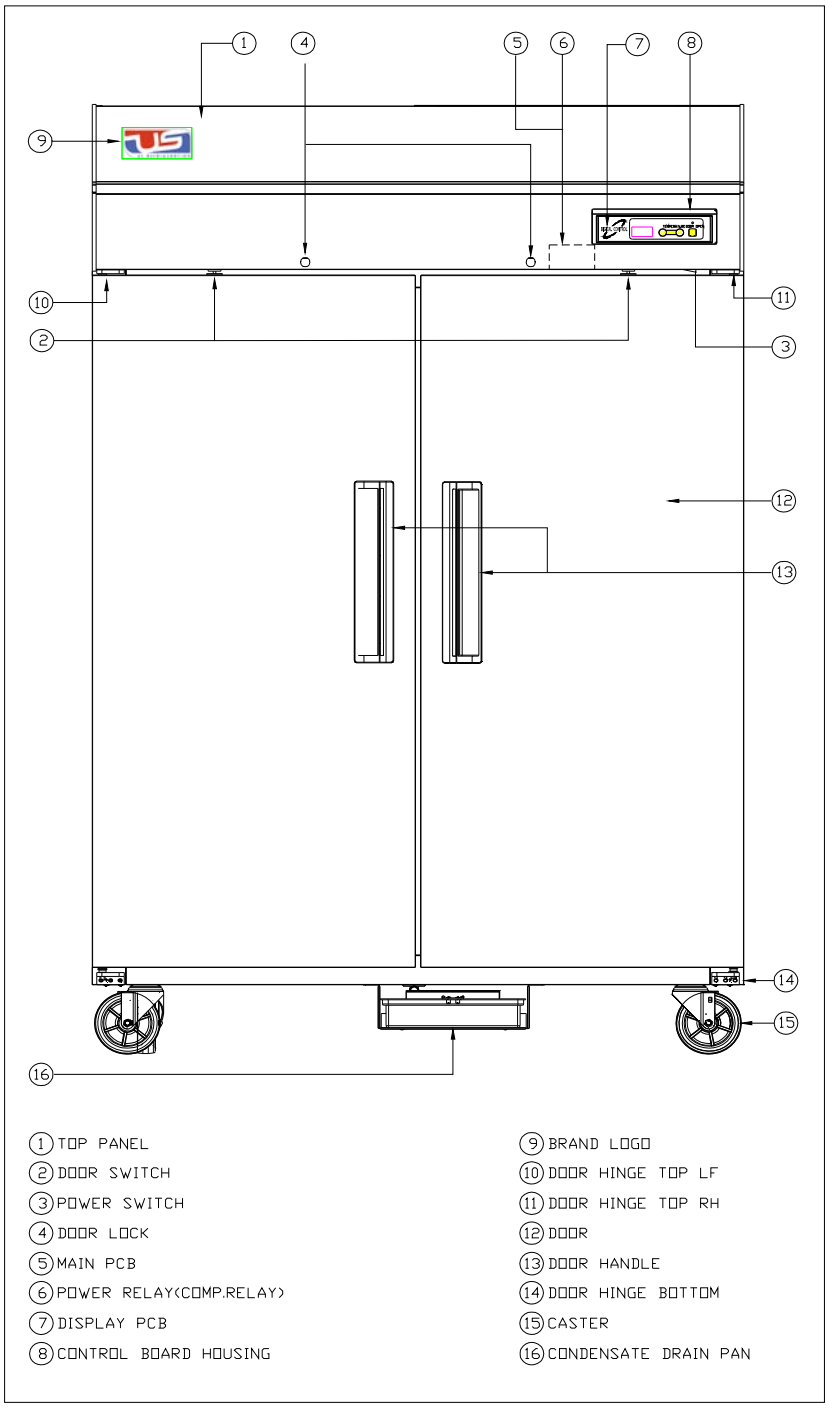
7.PART-LIST

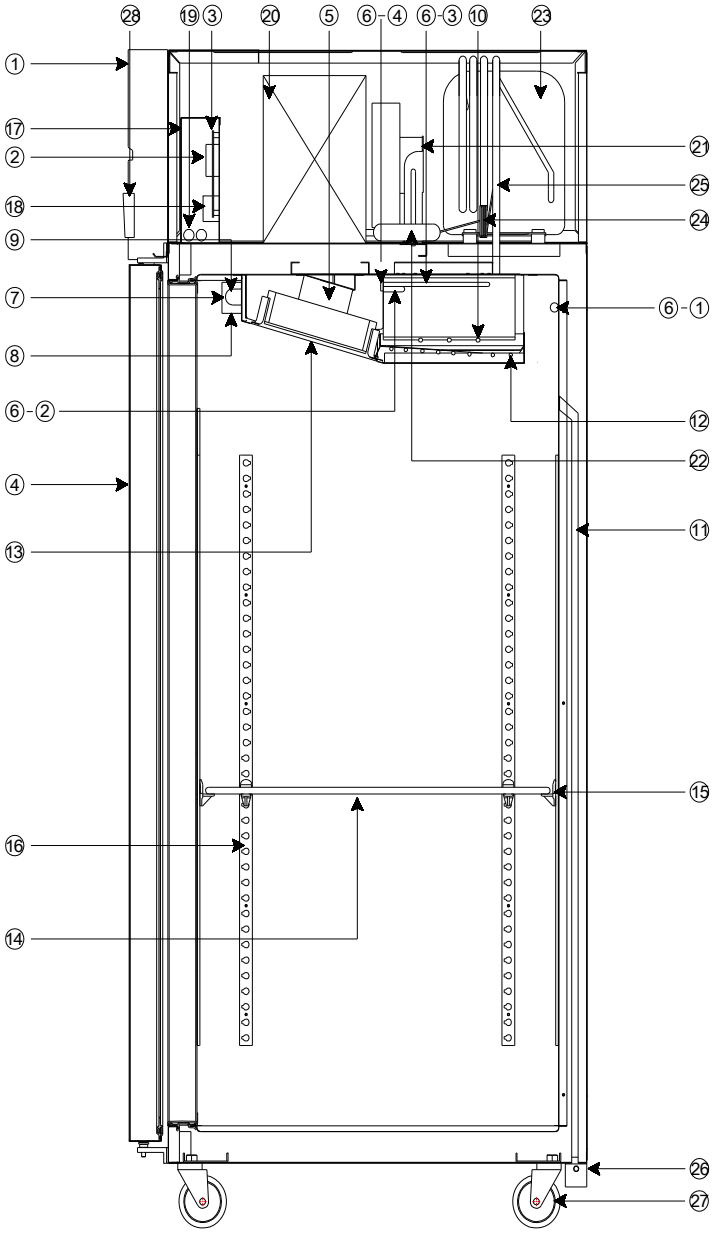
1.FEATURE CHART

1-1. FRONT VIEW (UMTM-47F)



1. TOP PANEL
2. DOOR SWITCH
3. POWER SWITCH
4. DOOR LOCK
5. MAIN PCB
6. POWER RELAY(COMP.RELAY)
7. DISPLAY PCB
8. CONTROL BOARD HOUSING
9. BRAND LOGO
10. DOOR HINGE TOP LF
11. DOOR HINGE TOP RH
12. DOOR
13. DOOR HANDLE
14. DOOR HINGE BOTTOM
15. CASTER
16. CONDENSATE DRAIN PAN

1-2. SIDE VIEW (UMTM-47F)



① TOP PANEL
② DOOR SWITCH
③ MAIN PCB
④ DOOR
⑤ EVAPORATOR FAN MOTOR
⑥ SENSOR
⑥-① FREEZER C SENSOR
⑥-② DEFROST SENSOR
⑥-③ REFRIGERATOR C SENSOR
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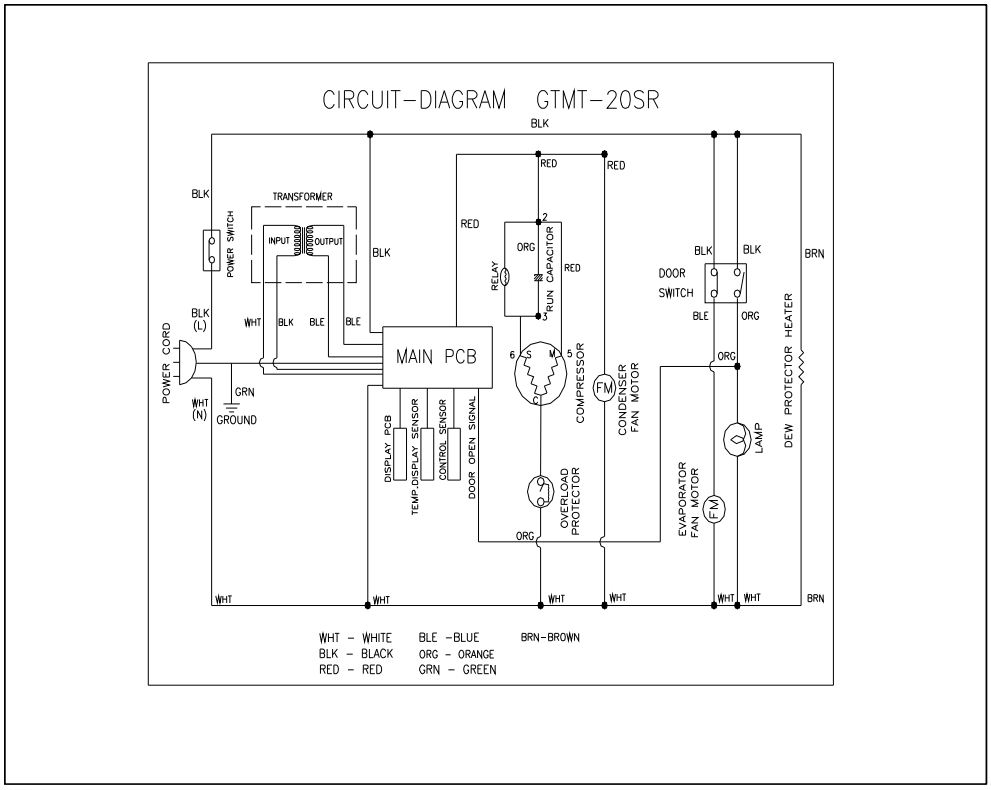
⑦ LAMP BULB
⑧ LAMP SHIELD
⑨ LAMP SOCKET
⑩ EVAPORATOR DEFROST HEATER
⑪ EVAPORATOR DRAIN HOSE
⑫ EVAPORATOR DRAIN PAN HEATER
⑬ EVAPORATOR FAN MOTOR GUARD
⑭ SHELF
⑮ SHELF CLIP
⑯ SHELF STANDARD
⑰ CONTROL PANEL
⑱ TRANSFORMER
⑲ COMPRESSOR CAPACITOR
⑳ CONDENSER COIL
㉑ CONDENSER FAN MOTOR
㉒ CONDENSER DRYER
㉓ COMPRESSOR
㉔ CAPILLARY TUBE
㉕ SUCTION LINE
㉖ CONDENSATE DRAIN PAN
㉗ CASTER

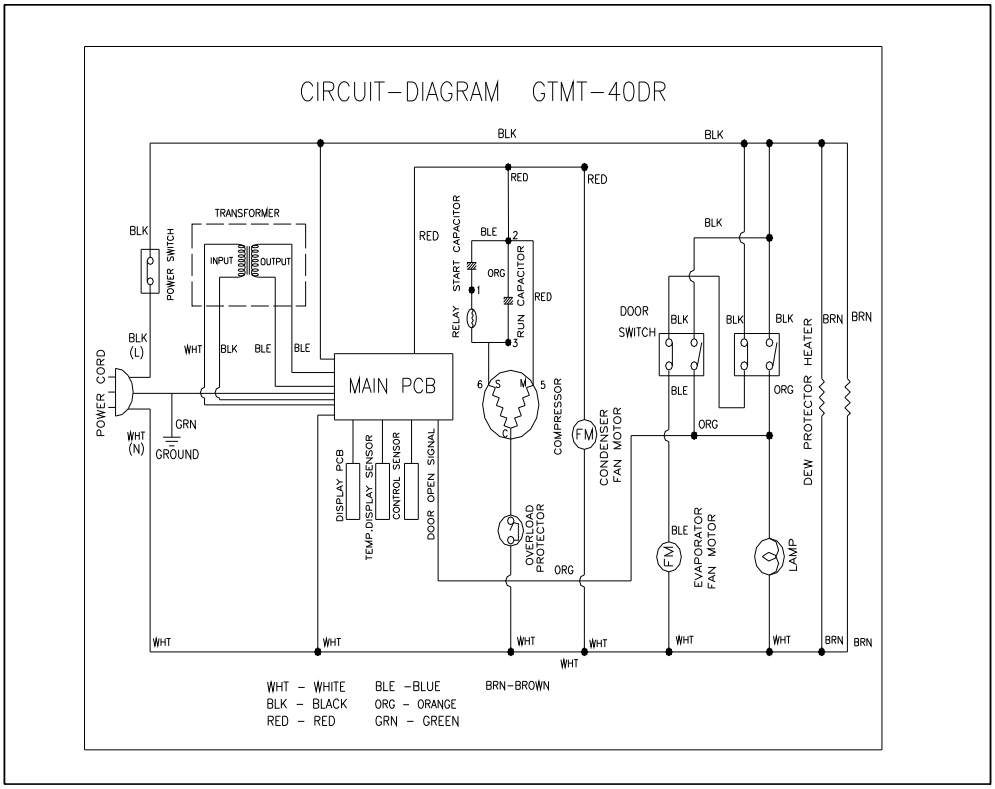
2.WIRING DIAGRAM

2-1. REFRIGERATOR

- UMTM-23R

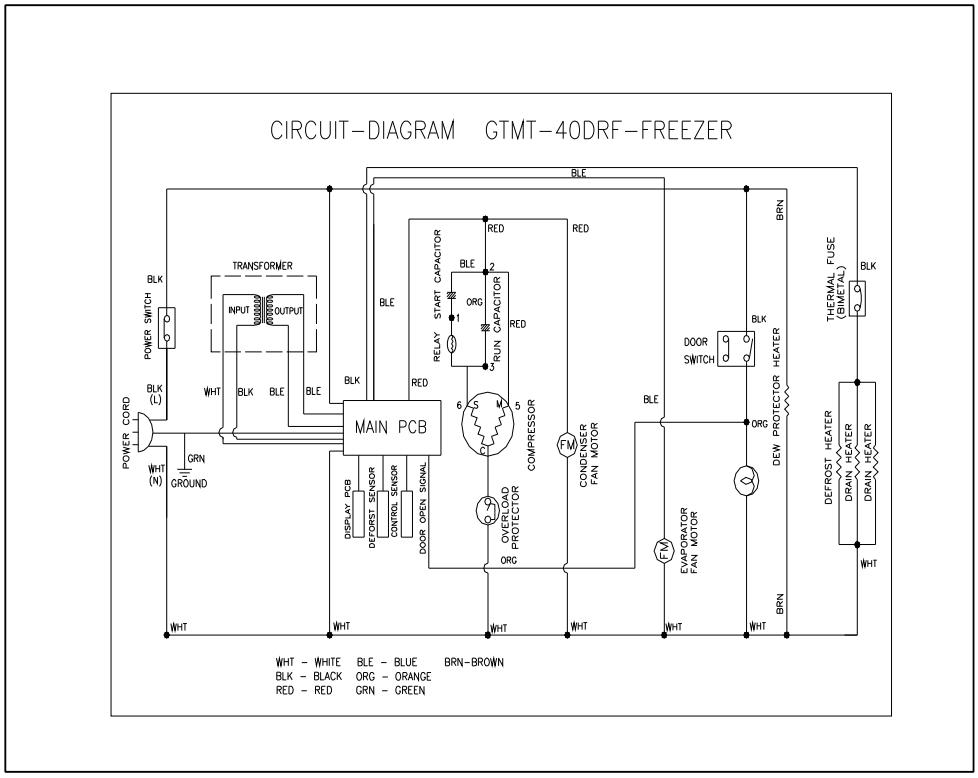


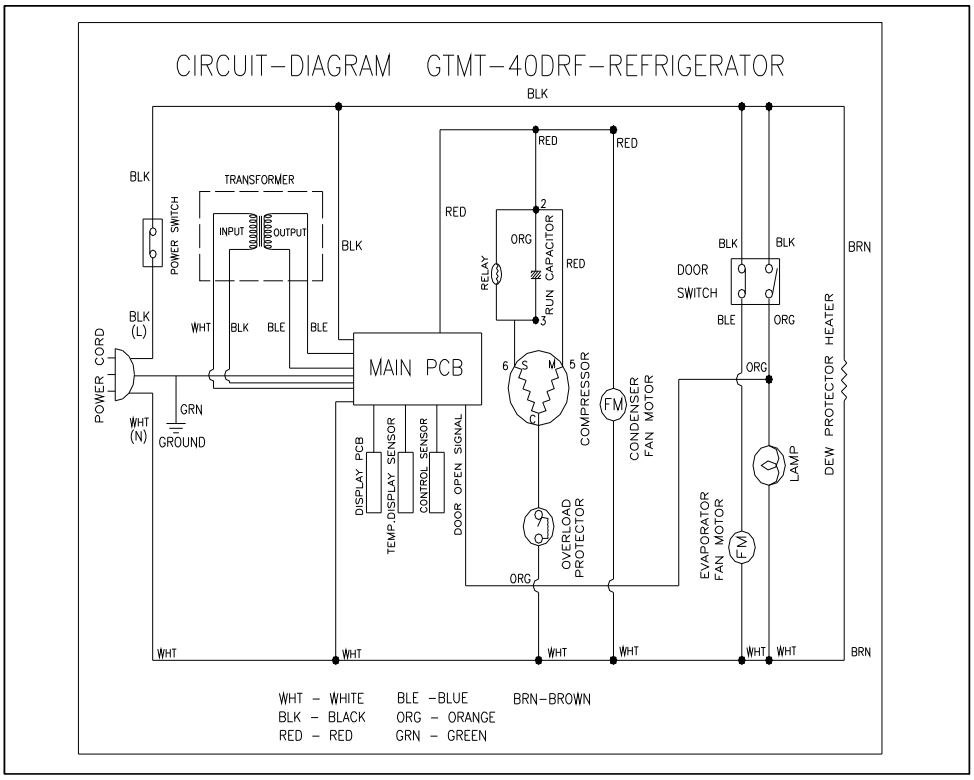
- UMTM-47R



2.WIRING DIAGRAM

- UMTM-47DRF



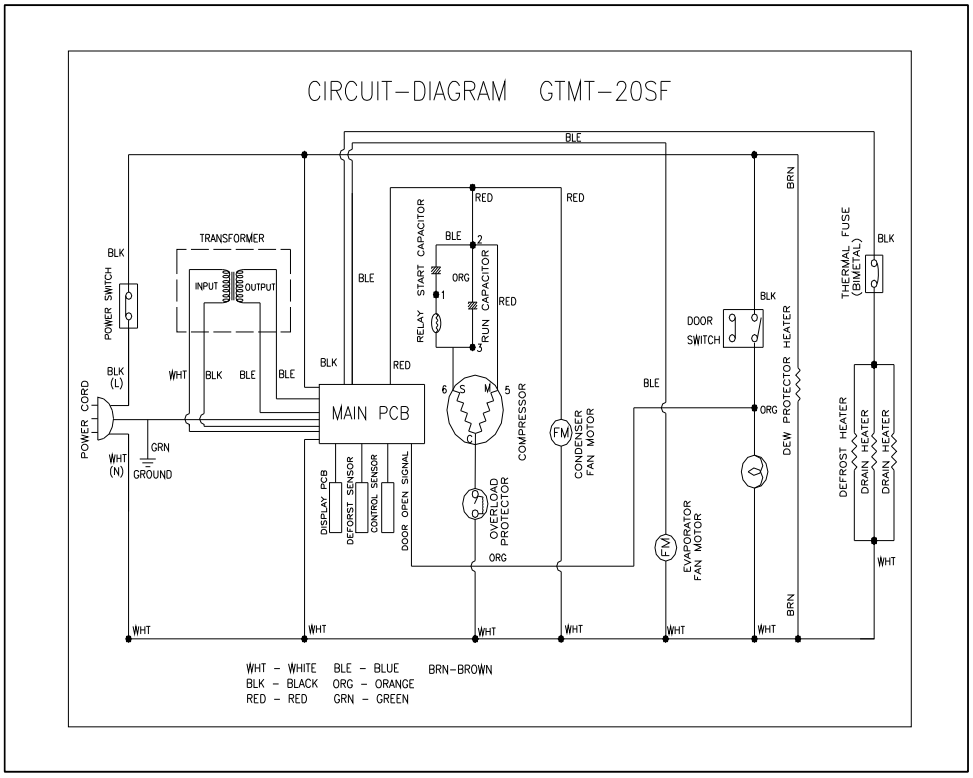


2.WIRING DIAGRAM

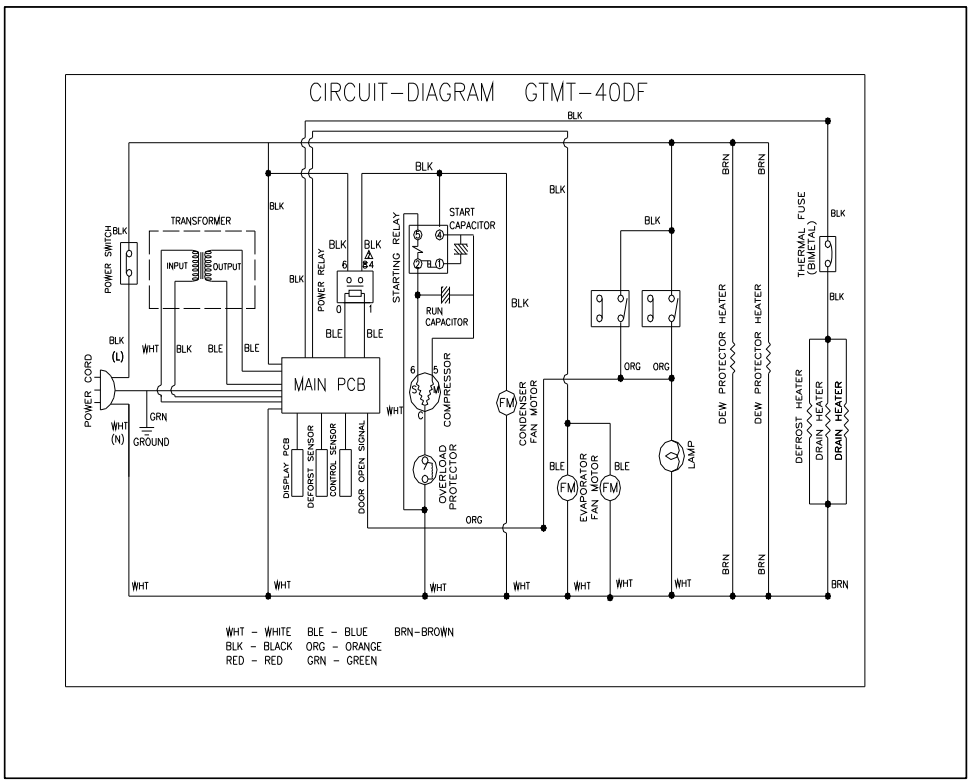
2-2. FREEZER

WIRING DIAGRAM

- UMTM-23F



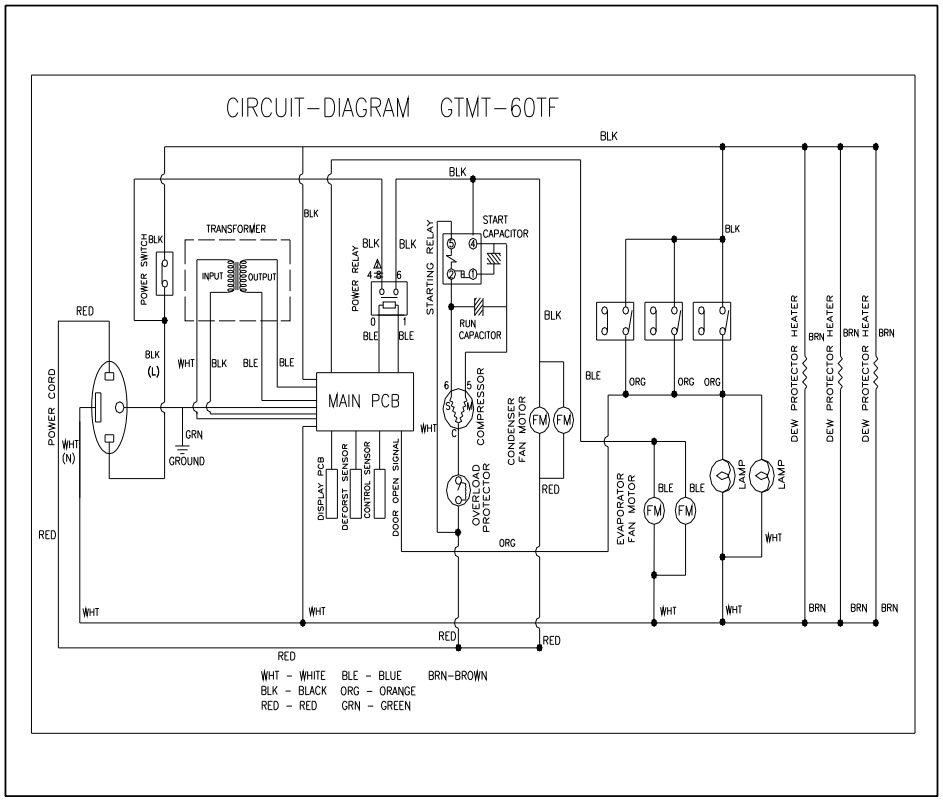
- UMTM-47F



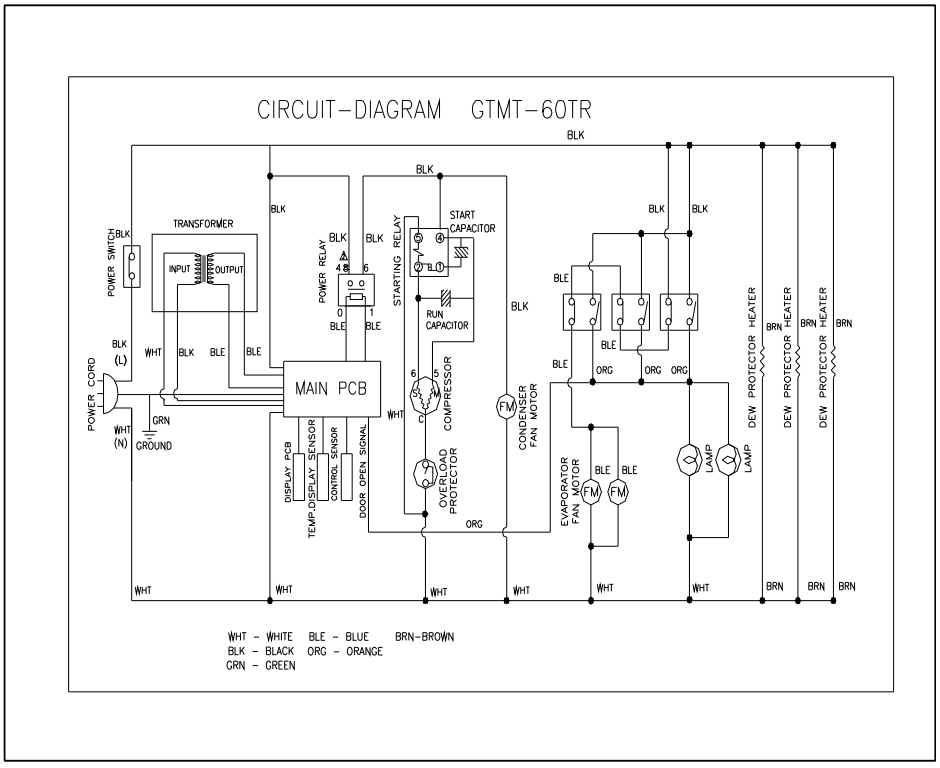
2.WIRING DIAGRAM

- UMTM-66F

WIRING DIAGRAM

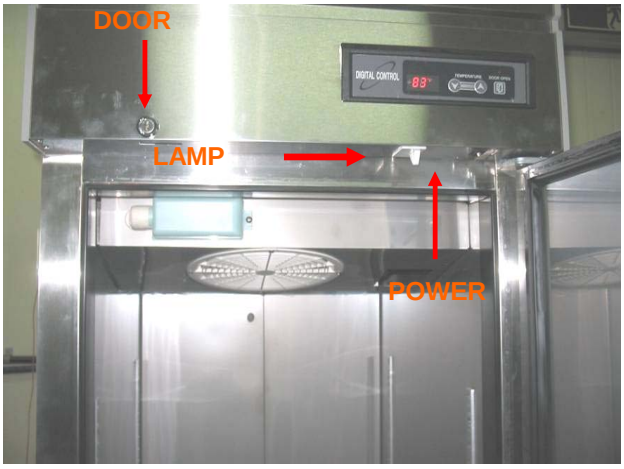


- UMTM-66R

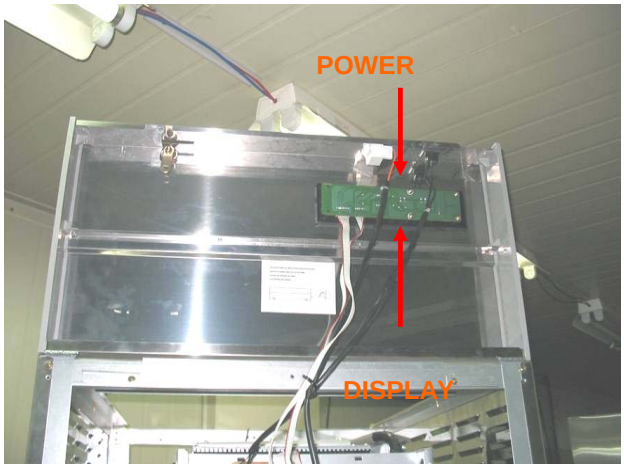


3.PART DETAILS

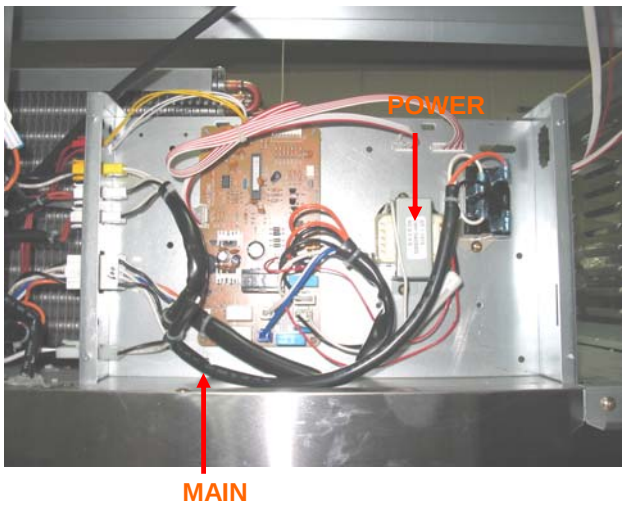
3-1. TOP PANEL



Display PCB



Main PCB

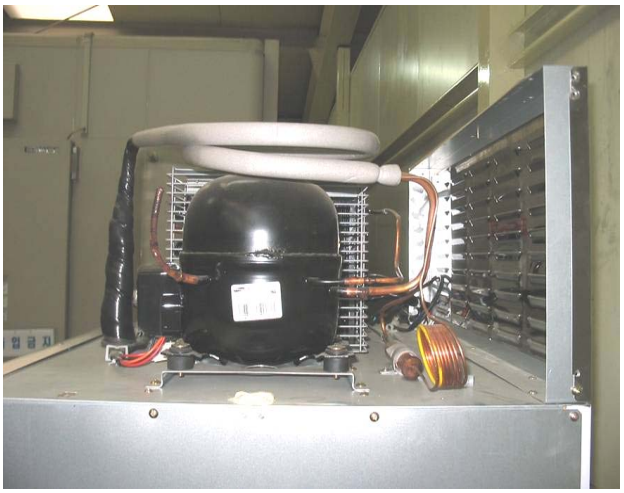


3-2. REFRIGERATION COMPARTMENT

- Condensing units : Compressor, Condenser Fan Motor,
  Condenser Coil, Condenser Dryer.
- Others : Power-cord, Drain pan

UMTM-47R

UMTM-47F



UMTM-23F,UMTM-23

3-2. REFRIGERATION COMPARTMENT

Condensing Unit

UMTM-66F,UMTM-66R

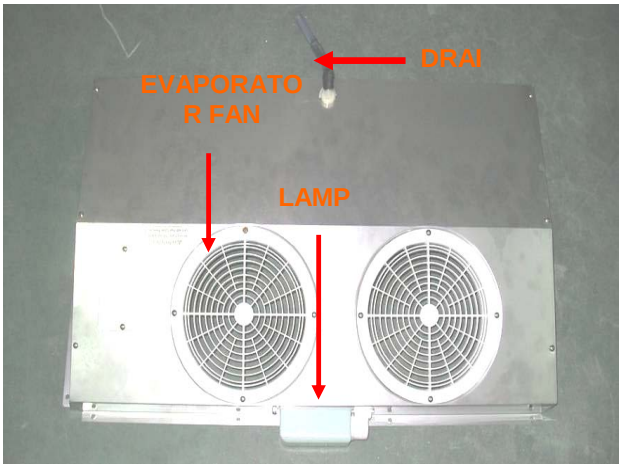
UMTM-47DRF

3-3. DOOR

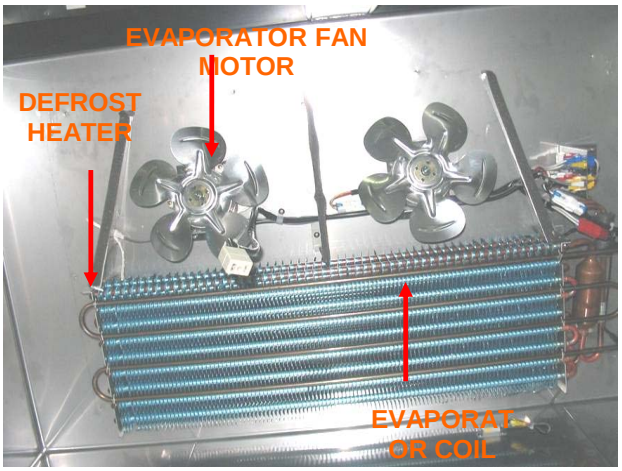
Door Gasket

3-4. COOLING COMPARTMENT

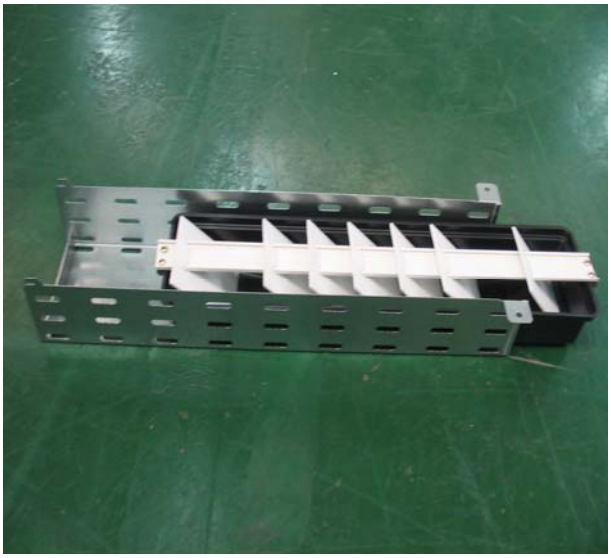
Evaporator Housing (Duct) (UMTM-47F)



Freezer Evaporator (UMTM-47F)

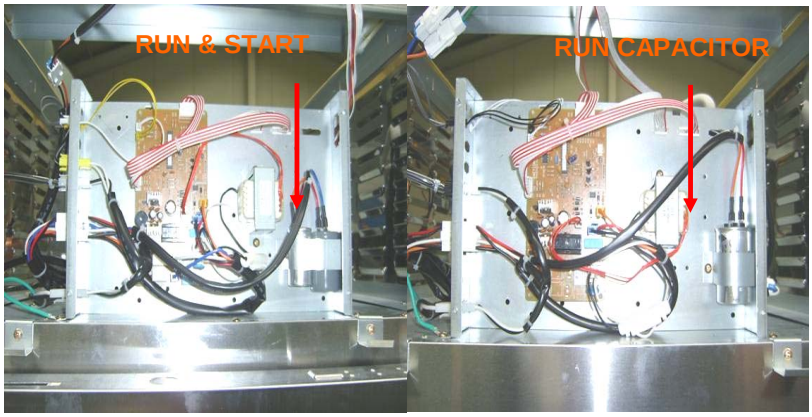


Condensate Drain Pan



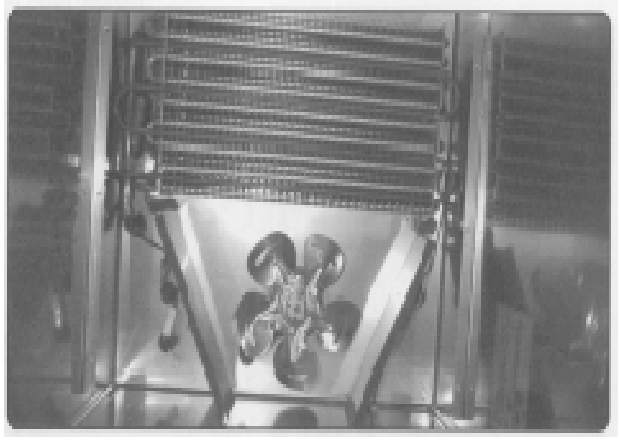
Condenser Fan Motor Assembly

Compressor Capacitor (Running & Starting Capacitor)

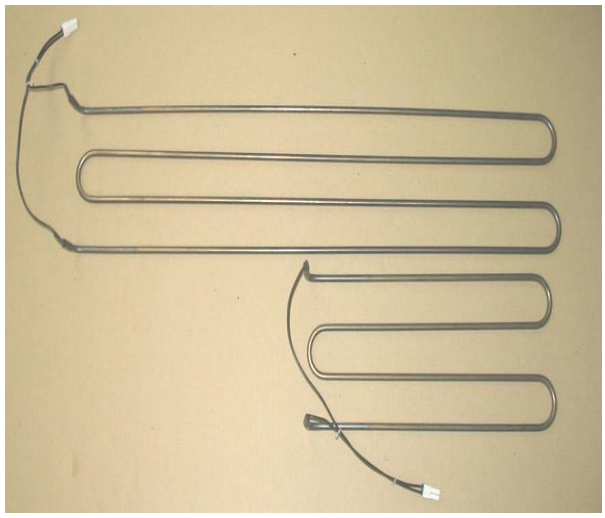


Evaporator Housing (Duct) (UMTM-23F, UMTM-23R Type)

Coil Evaporator (UMTM-23F)



Evaporator Defrost Heater (UMTM-23F, UMTM-47F, UMTM-47DRF, UMTM-66F)



4. MAIN COMPONENTS

4-1.COMPRESSOR

※.GST-60TF(115/208~220V/60Hz)

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Refrigerant	R-134a			R-404A	R-134a	
Voltage	115V/60Hz					
Comp.Model	HBL27YE-1	SK1A1C-L2W		CAJ2432Z(A)	SK1A1C-L2W	CAJ4476Y(A)
Part code	R7439-420	R7439-110		R7430-340	R7439-110	R7439-360
Starting type	CSR	CSR		CSR	CSR	CSR
MODEL	UMTM-23R UMTM-47DRF	UMTM-23F UMTM-47DRF	UMTM-47R	UMTM-47F	UMTM-66F	UMTM-66R
Refrigerant	R-134a			R-404A		R-134a
Voltage	115V/60Hz					
Comp.Model	SK182C-L2U	SK1A1C-L2W		CAJ2432Z(A)		CAJ4476Y(A)
Part code	R7439-010	R7439-110		R7430-340		R7439-360
Starting type	CSR	CSR		CSR		CSR

4-2.POWER-Relay(COMP. Relay)

※.GST-60TF(115/208~220V/60Hz)

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115V/60Hz					
Relay Model	G7L-1A-TUB					
Part code	R					
MODEL	UMTM-23R UMTM-47DRF	UMTM-23F UMTM-47DRF	UMTM-47	UMTM-47F	UMTM-66F	UMTM-66R
Voltage	115V/60Hz					
Relay Model	G7L-1A-TUB					
Part code	R					

4-3.CONDENSER DRYER

MODEL	UMTM-23R UMTM-47DRF	UMTM-23F UMTM-47DRF	UMTM-47	UMTM-47F	UMTM-66F	UMTM-66R
Refrigerant	R-134a	R-134a	R-134a	R-404A	R-404A	R-134a
spec	36GR	36GR	36GR	407GR	407GR	407GR
Part code	R2183-032	R2183-032	R2183-032	R2183-100	R2183-100	R2183-032

4-4.COMPRESSOR CAPACITOR

※.GST-60TF(115/208~220V/60Hz)

MODEL	UMTM-23R UMTM-47DRF	UMTM-23F UMTM-47DRF	UMTM-47	UMTM-47F	UMTM-66R	UMTM-66F
Voltage	115V/60Hz					
Running	230VAC/10μF	250VAC 12μF				
Part code	R7549-170	R7543-110				
Starting	200VAC/100μF	250VAC 125μF				
Part code	R7549-160	R7543-100				

4-5.EVAPORATOR FAN MOTOR

※.GST-60TF(115/208~220V/60Hz)

MODEL	UMTM-23R UMTM-47DRF	UMTM-23F UMTM-47DRF	UMTM-47	UMTM-47F	UMTM-66F	UMTM-66R
Voltage	115V/60Hz					
Motor Model	IS-4420DADY					
Part code	R7423-033					

4-6. CONDENSER FAN MOTOR ※.GST-60TF(115/208~220V/60Hz)

MODEL	UMTM-23R UMTM-47DRF	UMTM-47	UMTM-66R	UMTM-23F UMTM-47DRF	UMTM-47F	UMTM-66F
Voltage	115V/60Hz					
Part code	R7109-510			R7109-500		

4-7.EVAPORATOR DEFROST HEATER ※.GST-60TF(115/208~220V/60Hz)

MODEL	UMTM-23R UMTM-47DRF	UMTM-47R	UMTM-66R	UMTM-23F UMTM-47DRF	UMTM-47F	UMTM-66F
Voltage	115V/60Hz					
spec	-			445W	600W	900W
Part code				R7313-330	R7313-411	R7313-440

4-8.LAMP BULB

MODEL	UMTM-23R UMTM-47DRF	UMTM-47	UMTM-66R	UMTM-23F UMTM-47DRF	UMTM-47F	UMTM-66F
Voltage	115V/60Hz					
spec	25W					
Part code	R7394-010					

4-9.MAIN PCB (DC12V)

MODEL	UMTM-23R UMTM-47DRF	UMTM-47	UMTM-66R	UMTM-23F UMTM-47DRF	UMTM-47F	UMTM-66F
Voltage	DC 12V					
Part code	R7113-210					

4-10.DISPLAY PCB (DC12V)

MODEL	UMTM-23R UMTM-47DRF	UMTM-47	UMTM-66R	UMTM-23F UMTM-47DRF	UMTM-47F	UMTM-66F
Voltage	DC 12V					
Part code	R7113-210					

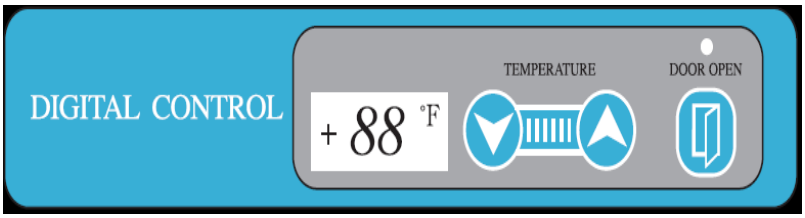
5. ELECTRONIC CONTROL INSTRUCTIONS

5-1. FREEZER CONTROL

5-1-1. HOW TO USE THE DISPLAY PCB PANEL

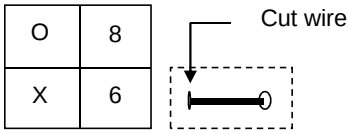
- LED
- It indicates setting temperature, except defrost function

- Door Open LED



- Temperature can be controlled by the user.
- Factory setting is at level "2 °F". Setting can be changed by pressing up/down button.
- Up arrow for Colder, Down arrow for Warmer.

5-1-2. FUNCTION TABLE & MANUAL DEFROST

NO	Function	Controlled Part	Description
1	Initial Operation		1. LED displays inside temperature 2. Begins to run immediately if higher than 50℉ and begins to run after 5 minutes pause if lower than 50℉.
2	Temperature Control	Compressor LED	1. The Temperature can be changed by pushing up/down buttons. 2. LED displays inside temperature 3. Buzzer buzzes 1 time whenever a button is pressed 4. Compressor automatically turns on and off by C-sensor (Except error mode) 5. Comp. On/off temperature at C-sensor (℉) Setting 5.0 3.0 1.0 -1.0 -2.0 Comp On 5.0 3.2 1.4 -0.4 -2.2 Comp Off -2.2 -4.0 -5.8 -7.6 -9.4 --- Setting -3.0 -5.0 -7.0 -9.0 Comp On -3.1 -4.0 -4.9 -7.6 Comp Off -10.3 -11.2 -12.1 -13.9
3	Defrost Function	Heater Compressor	1)Defrost function is controlled time interval setting. 2)Factory setting is every 8 hours. 3)If it becomes defrost cycle time, Defrost heater is operated when D-sensor senses below 23℉. 4)Defrost heater terminates when D-sensor temperature comes to above 53℉, then compressor will start after 10 minutes. 5)During defrost period, LED displays dF. 6)If D-sensor dose not cut off defrost heater, main pcb has a back up for defrost time, the maximum is 40 minutes. 7)Defrost can be set every 6 hours by cutting wire the main pcb. 
4	Error Display	LED	1)Press `up' button 3 times with pressing and holding `down´ button. Above procedure switches normal display to error display mode. And then 88 LED indicates, `(D1)' or `(F3)' or `(C1)' respectively. 2)10 seconds after the last button pressed, error display mode will be switched to normal display mode.

5-1-3. ERROR CODE TABLE

CODE	Content	Perception Method	Refrigeration state
CO	C-sensor	- OPEN	- Normal operation - TIME CONTROL Comp On : 10MINUTES Comp Off : 6MINUTES
CS		- SHORT	
(D1) (F3) (C1)	D-sensor	- OPEN	
		- SHORT	

5-1-4. SENSOR DESCRIPTION

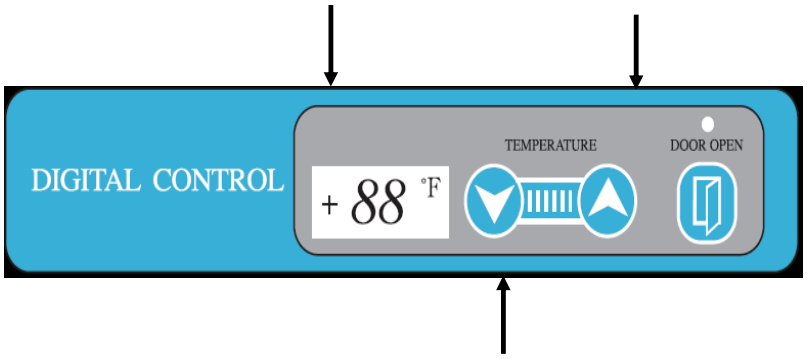
Sensor	Model	Role	Wire Color
D-sensor	Freezer	Detect Eva coil's temp. to start and terminate defrosting.	WHT
C-sensor	Freezer	Detect inside air temp. to operate comp and to indicate the inside temp. on the display PCB	BLK
	Refrigerator	Detect Eva coil's temp. to operate comp	BLK
T-sensor	Refrigerator	Detect inside air temp. to indicate the inside temp on the display PCB	WHT

5-2. REFRIGERATOR CONTROL

5-2-1. HOW TO USE THE DISPLAY PCB PANEL

- LED
- It indicates inside temperature,

- Door Open LED



- Temperature can be controlled by the user.
- Factory setting is at level "35 °F". Setting can be changed by pressing up/down button.

5-2-2. FUNCTION TABLE

NO	Function	Controlled Part	Description
1	Initial Operation		1. LED displays inside temperature 2. Begins to run immediately if higher than 41℉ and begin to run after 5 minutes pause if lower than 41℉.
2	Temperature Control	Compressor LED	1. The Temperature can be changed by pushing up/down buttons. 2. LED displays inside temperature 3. Buzzer buzzes 1 time whenever a button is pressed 4. Compressor automatically turns on and off by C-sensor (Except error mode) 5. Comp. On/off temperature at C-sensor(℉) Setting 39 38 37 36 35 Comp On 41.0 40.2 39.3 38.3 37.4 Comp Off 27.7 26.1 24.4 22.8 21.3 Setting 34 32 30 28 Comp On 37.4 37.4 37.4 37.4 Comp Off 20.3 19.4 18.5 17.6
3	Error Display	LED	1)Press `up' button 3 times with pressing and holding `down´ button. Above procedure switches normal display to error display mode. And then 88 LED indicates, `(D1)' or `(C1)' respectively. 2)10 seconds after the last button pressed, error display mode will be switched to normal display mode.

5-2-3. ERROR CODE

CODE	Content	Perception Method	Refrigeration state
tO	T-sensor	- OPEN	- Normal operation - Time control Comp ON : 10 MINUTES Comp OFF : 20 MINUTES
ts		- SHORT	
(D1) (C1)	C-sensor	- OPEN	
		- SHORT	

6. REPLACEMENT OF MAIN COMPONENTS

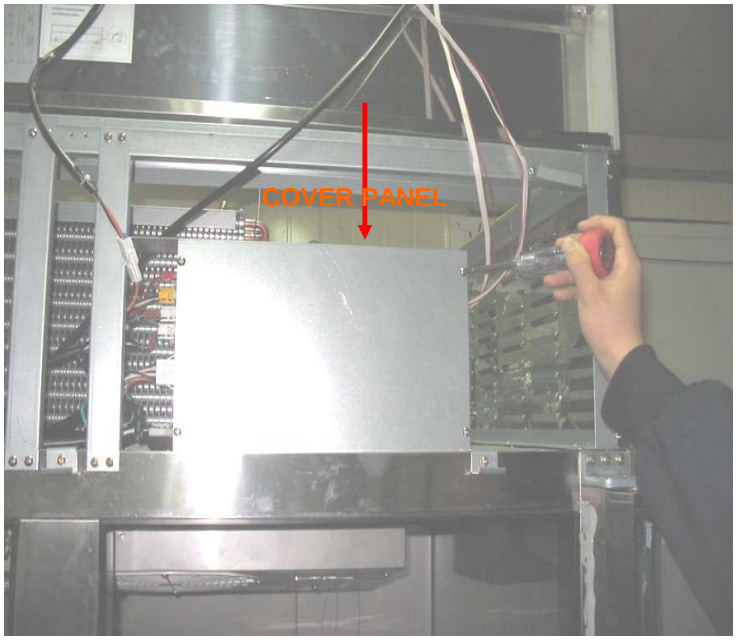
6-1. TOP PANEL PARTS

- MAIN PCB
- LOCK ASSEMBLY or POWER SWITCH
- DOOR SWITCH

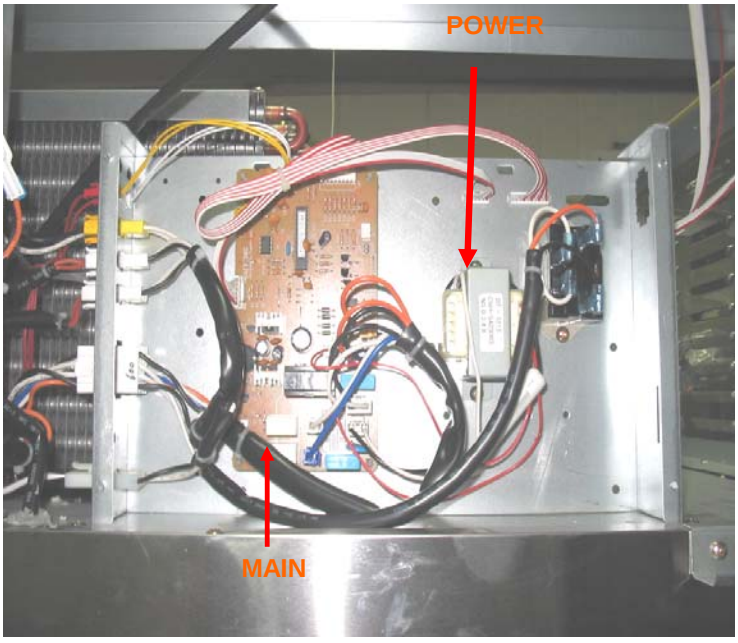
A. Remove the screws located on the top of top panel.

B. Remove the screws located on the bottom of top panel.

C. Place the top panel on top of the cabinet.

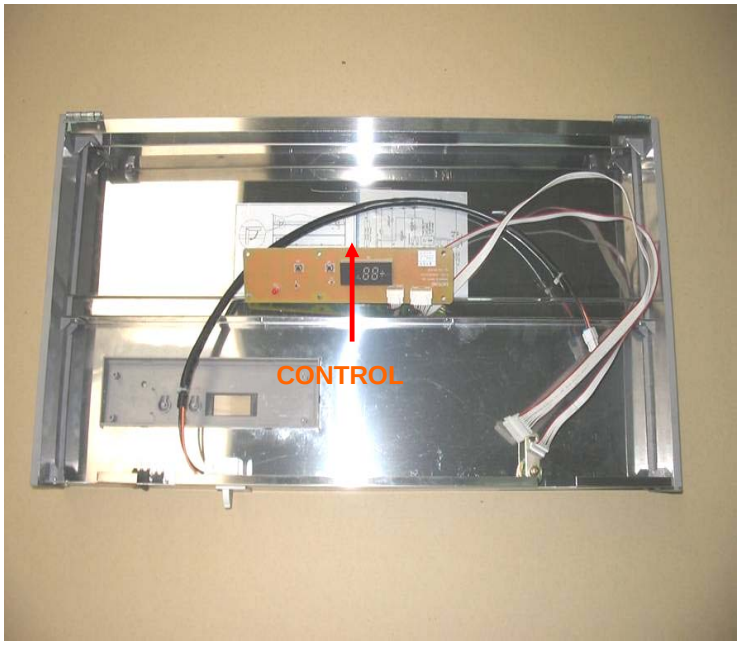


D. You can replace POWER-Relay and MAIN PCB



E. Pull out the harness located in back of top panel.

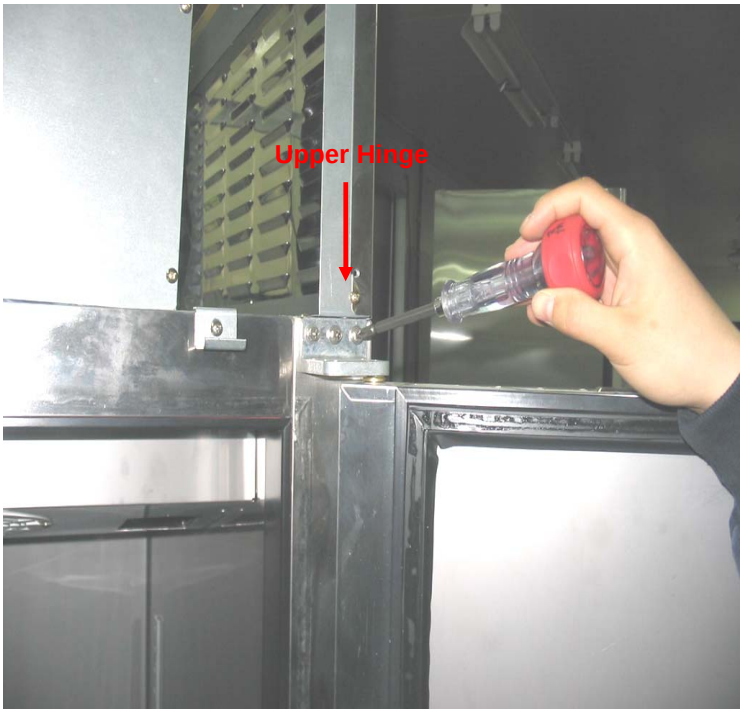
You can replace power switch, lamp switch and display PCB.

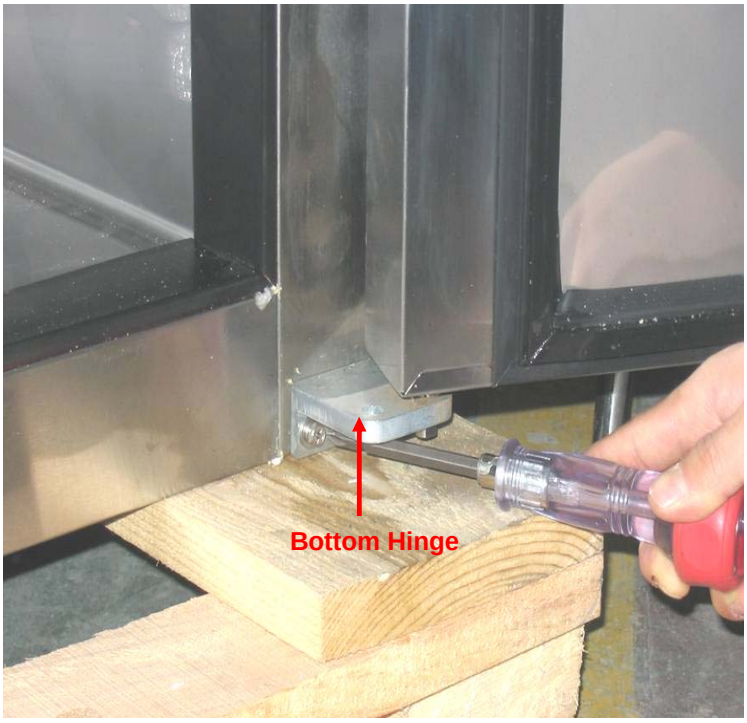


6-2. REPLACING DOOR

A. Disassemble top panel as described section 6-1 A,B

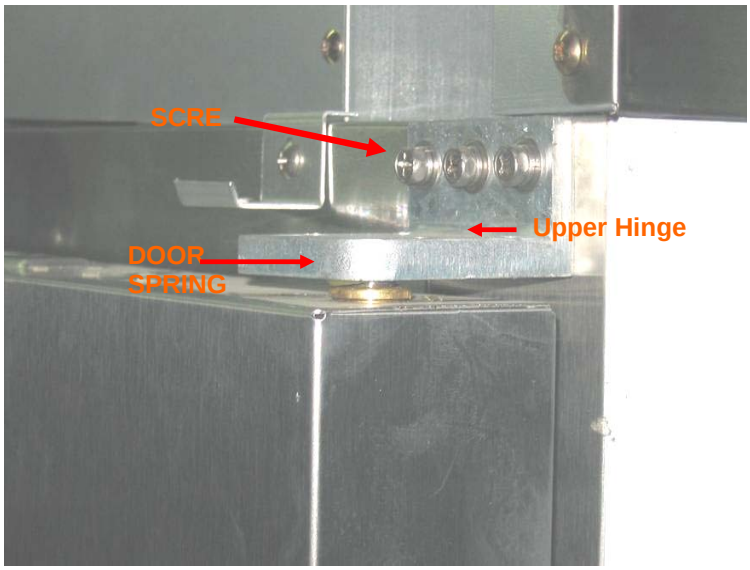
B. Open the door and unscrew the bottom hinge.



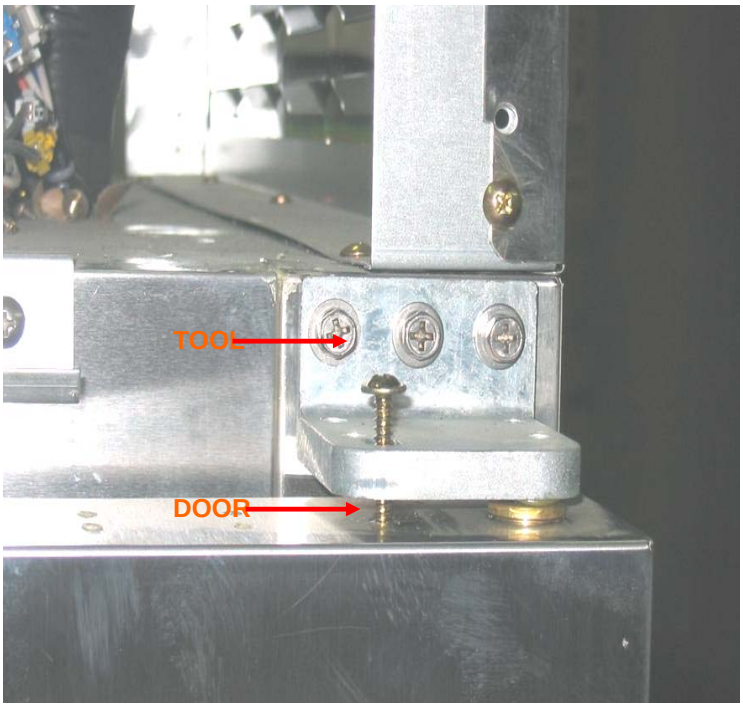


6-3. DOOR HINGE ADJUSTMENT

A. Detailed structure of DOOR-HINGE

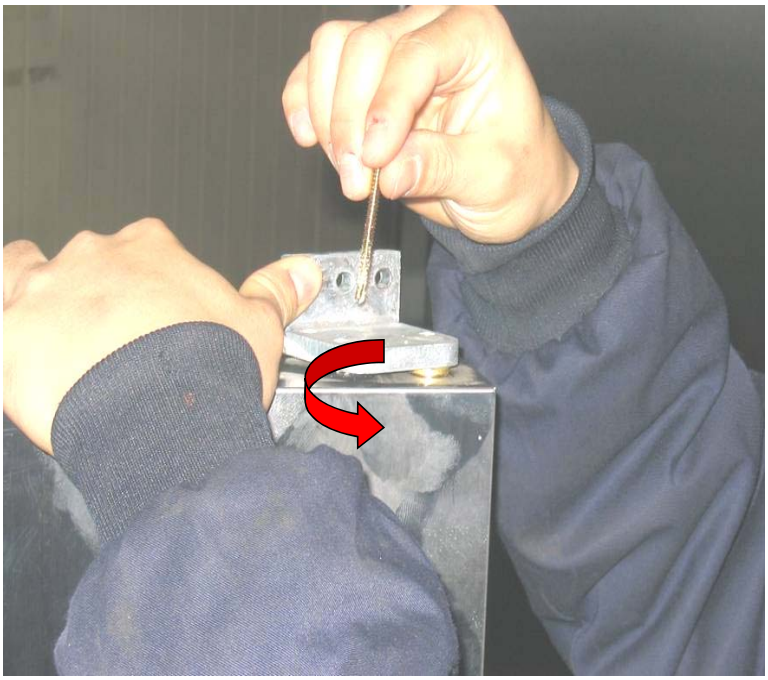


B. Insert it between a upper hinge and a door with a tool.



C. Unscrew the upper hinge.

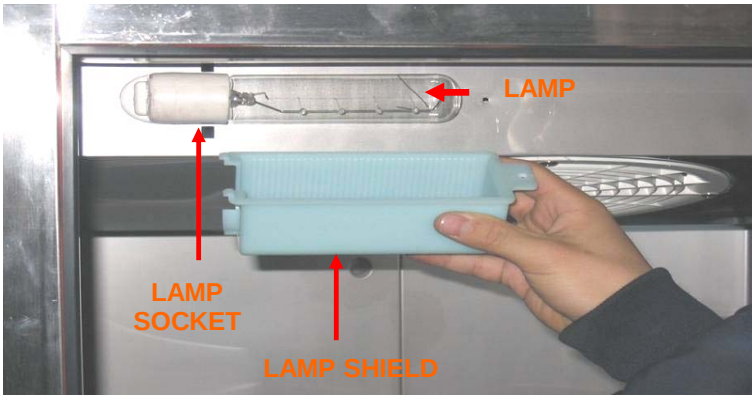
D. Remove the upper door hinge.



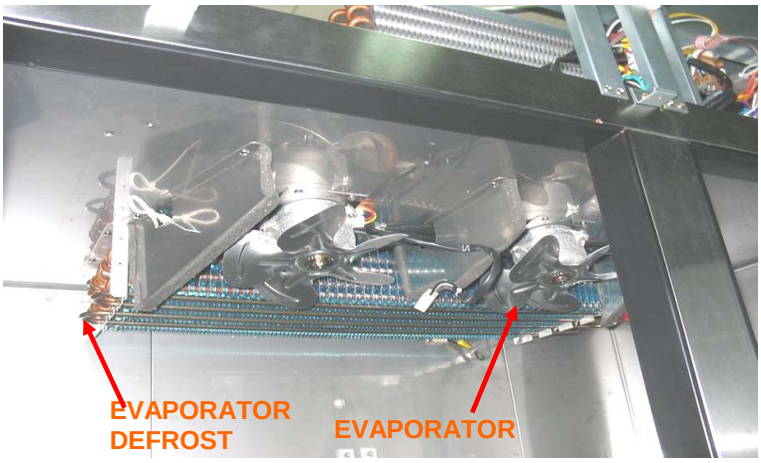
6-4. REFRIGERATION COMPARTMENT PARTS

- LAMP BULB, LAMP SHIELD
- EVAPORATOR FAN MOTOR
- D-SENSOR, C-SENSOR, T-SENSOR
- EVAPORATOR COIL
- EVAPORATOR DEFROST HEATER

A. Disassemble lamp shield



B. Disassemble duct

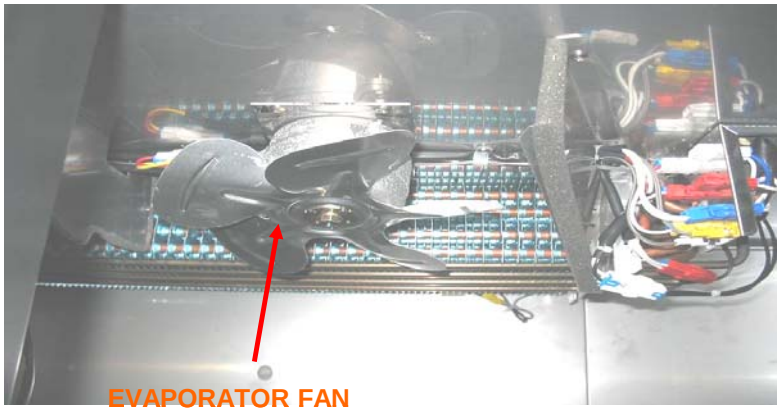


C. Pull out the lamp

D. Replacing evaporator fan motor

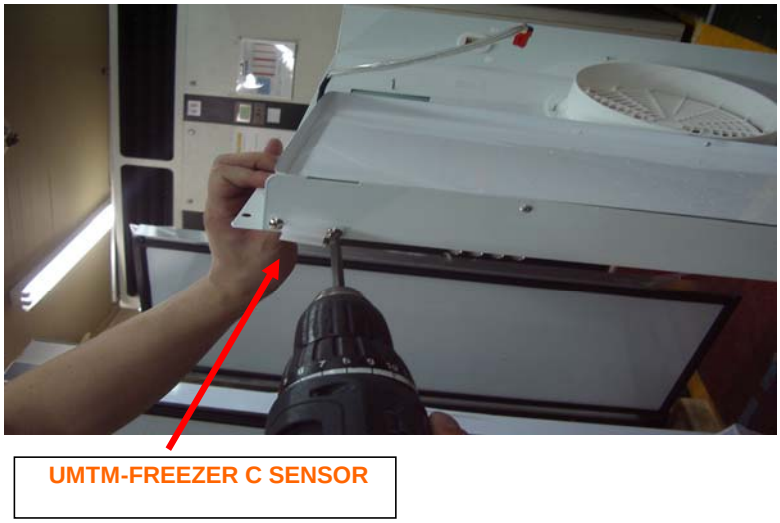
D-1. Disconnect the fan motor's harness.

D-2. Remove the four screws which are located on bottom of fan motor

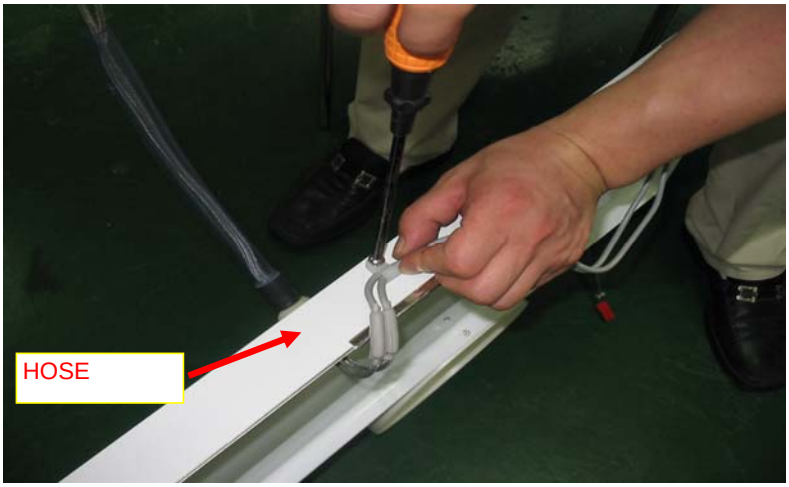


E. Replacing sensor

E-1. FREEZER C-sensor

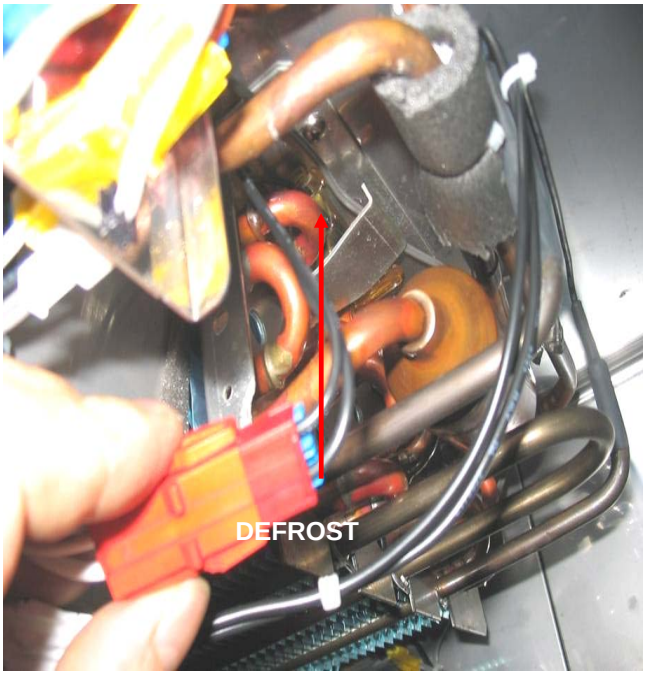


E. Drain hose heater

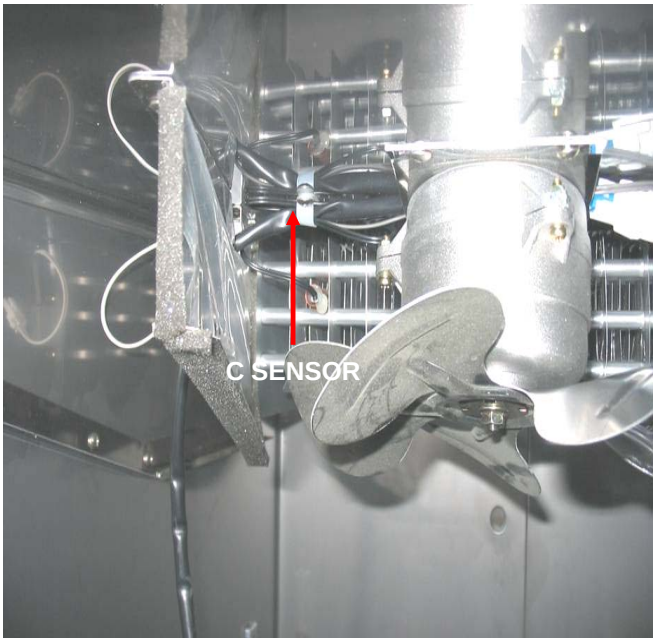


E-2. Defrost-sensor of freezer

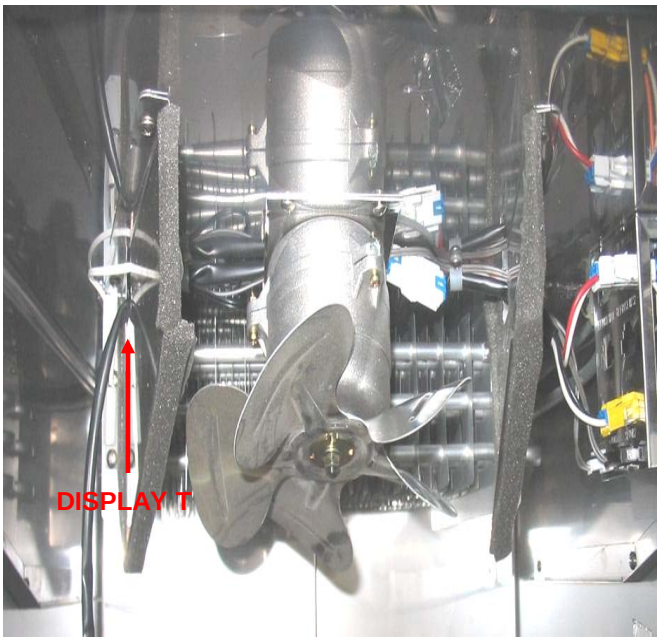
Disassemble the DEFROST-sensor from the evaporator

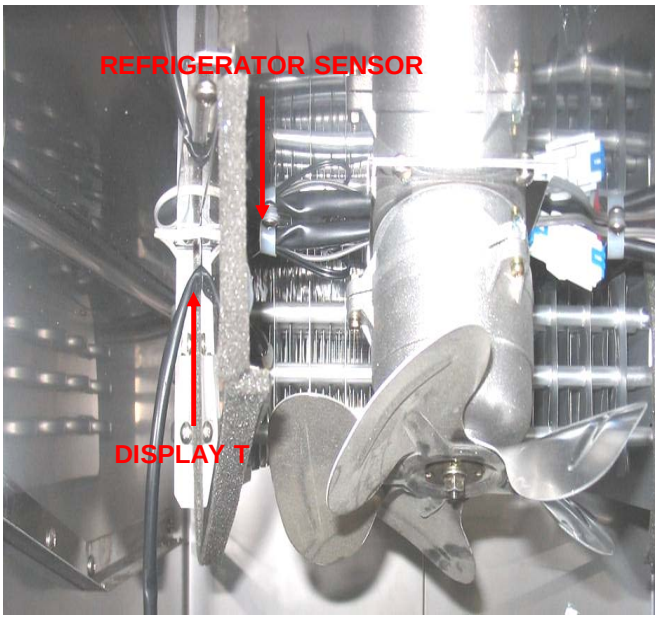


E-3. C-sensor of Refrigerator



E-4. T-sensor (Temperature Display Sensor) of Refrigerator





7. PART-LIST

Part name	Code	Description	Solid						
			20SR	40DR	20SF	40DF	40DRF	60TR	60T
CASTER									
CASTER	R3323-170	SPCC 5"	2	2	2	2	2	2	2
CASTER BRAKE	R3323-180	SPCC 5"	2	2	2	2	2	2	2
COMPRESSOR									
COMPRESSOR	R7439-360	CAJ4476Y(A)						1	
COMPRESSOR	R7439-350	CAJ2446Z							1
COMPRESSOR	R7439-340	CAJ2432Z(A)				1			
COMPRESSOR	R7439-110	SK1A1C-L2W		1	1		1		
COMPRESSOR	R7439-420	HBL27YE-1							
COMPRESSOR	R7439-010	SK182C-L2U	1				1		
COMPRESSOR START CAPACITOR	R7543-100	125VAC 125UF		1	1		1		
COMPRESSOR RUN CAPACITOR	R7543-130	250VAC 12UF	1				1		
HARNESS RELAY,A	R7403-643	AWG18				1		1	1
HARNESS RELAY,B	R7403-653	AWG18			1		1		
HARNESS RELAY,C	R7403-661	AWG18		1					
HARNESS RELAY,D	R7403-671	AWG18	1						
ASSY' POWER-CORD	R8393-010	UL-1015,4P-WIRE							1
POWER-CORD	R7363-132	3,000MM	1	1	1	1	1	1	
CONDENSER									
CONDENSER COIL	R2272-030	PIN CONDENSER							1
CONDENSER COIL	R2272-013	PIN CONDENSER				1		1	1
CONDENSER COIL	R2202-031	4.76 * 18,960	1	1	1		2		
CONDENSER DRYER	R2183-032	25.4 * 169 * 0.635	1	1	1		2		
CONDENSER DRYER	R2183-110	OD62 * 120.5				1		1	1
CONDENSER FAN									
CONDENSER FAN MOTOR	R7423-021	SE-043 9W CCW 1550PRM	1	1	1	1	2	1	2
CONDENSER FAN MOTOR BLADE	R3723-070	AL3004H14 9" CCW T1.0	1	1	1	1	2	1	2
CONDENSER FAN MOTOR BRACKET	R3313-260	SBHG1-0 T2.0 * 164	1	1	1	1	2	1	2
DRAIN									
DRAIN PAN	R3743-060	ABS BLK	1		1		2		
DRAIN PAN	R3742-070	ABS BLK		1		1		1	1
DRAIN WICKING BAR	R3853-230	PP WHT T2.0*40*569	1		1		2		
DRAIN WICKING BAR	R3853-240	PP WHT T2.0*40*657		1		1		1	1
DRAIN WICKING PADS	R1154-010	PP T2.5*99*103	1		1		2		
DRAIN WICKING PADS	R1154-020	PP T2.5*83*180		1		1		1	1
EVAPORATOR									
EVAPORATOR COIL	R2263-051	CU+AL			1		1		
EVAPORATOR COIL	R2263-062	CU+AL				1		1	1
EVAPORATOR COIL	R2263-082	CU+AL		1					
EVAPORATOR COIL	R2263-072	CU+AL	1				1		

PART-LIST

Part name	Code	Description	Solid						
			20SR	40DR	20SF	40DF	40DRF	60TR	60T
EVAPORATOR DEFROST HEATER	R7313-440	SUS304 Φ8 900W 15.0Ω							1
EVAPORATOR DEFROST HEATER	R7303-412	SUS304 Φ8 600W 22.0Ω				1			
EVAPORATOR DEFROST HEATER	R7313-331	SUS304 Φ8 445W 29.7Ω			1		1		
EVAPORATOR DRAIN PAN HEATER	R7313-431	PVC 105℃ 90W 147Ω							1
EVAPORATOR DRAIN PAN HEATER	R7303-174	PVC 105℃ 90W 147Ω			1				
EVAPORATOR DRAIN PAN HEATER	R7303-184	PVC 105℃ 90W 147Ω				1			
HEATER CORD DRAIN HOSE	R7313-490	115V,10W			1	1	1		1
SENSOR BRACKET	R3314-192	P.P,WHT	1	1	1	1	1	1	1
EVAPORATOR THERMAL FUSE	R7259-070	80℃±4 G4A00			1	1	1		1
DEFROST HEATER CLIP	R3834-330	STS304, T1X4X32			4	4	4		6
EVAPORATOR FAN MOTOR	R7423-033	IS-4420DADY 1650±150RPM	1	1	1	2	2	2	3
EVAPORATOR FAN MOTOR BLADE	R3729-010	8" C.C.W	1	1	1	2	2	2	3
EVAPORATOR FAN MOTOR BRACKET	R3203-482	1T*145*90 STS430-2B	1	1	1	2	2	2	3
FREEZER SENSOR	R7213-082	YELLOW			1	1	1		1
DEFROST SENSOR	R7213-102	WHITE			1	1	1		1
REFRIGERATOR SENSOR	R7213-092	BLACK	1	1			1	1	
DISPLAY SENSOR	R7213-112	WHITE	1	1			1	1	
TOP FRAME									
TOP FRAME ASSEMBLE	R8182-780	FREEZER/ REFRIGERATOR					1		
TOP FRAME ASSEMBLE	R8182-460	REFRIGERATOR	1	1				1	
TOP FRAME ASSEMBLE	R8182-450	FREEZER			1	1			1
TOP FRAME ASSEMBLE	R8182-440	REFRIGERATOR	1						
TOP FRAME ASSEMBLE	R8189-440	FREEZER			1				
TOP FRAME ASSEMBLE	R8189-450	REFRIGERATOR		1					
TOP FRAME ASSEMBLE	R8182-450	FRAME				1			
FREEZER BRAND LOGO	R5133-180	FREEZER			1	1			
REFRIGERATOR BRAND LOGO	R5133-170	REFRIGERATOR	1	1			1		
CONTROL BOARD HOUSING	R4142-290	ABS, EG-0763S, D/GRAY	1	1	1	1	2	1	1
DISPLAY PCB	R7113-210	20 * 220 *T1.5	1	1	1	1	2	1	1
DISPLAY PCB FILM	R4113-371	50 * 216	1	1	1	1	2	1	1
DOOR SWITCH	R7203-020	125V 1.5A	1	2	1	2	2	3	3
LAMP CODE A	R7403-691	AWG 18		1					
LAMP CODE B	R7403-810	AWG 18			1				
LAMP CODE C	R7403-820	AWG 18				1			
LAMP CODE D	R7403-701	AWG 18	1						
DOOR LOCK	R3739-010		1	2	1	2	2	3	3
CONTROL PANEL									
FREEZER MAIN PCB	R7119-760	FREEZER			1	1	1		1
REFRIGERATOR MAIN PCB	R7109-770	REFRIGERATOR	1	1			1	1	

PART-LIST

Part name	Code	Description	Solid						
			2OSR	4ODR	2OSF	4ODF	4ODRF	6OTR	6OT
TRANSFORMER	R7504-060	DT-1213,120V/60Hz	1	1	1	1	2	1	1
POWER RELAY	R7253-040	UZ-2A-BT110,25A/277VAC				1		1	1
SUPPORT-PCB	R3084-010	NYLON66	6	6	6	6	12	6	6
SHELF									
SHELF CLIP	R3313-151	POM	14	24	14	24	28	24	24
SHELF	R3233-310	MSWR10+PE Coating	3		3		3	3	
SHELF	R3233-300	MSWR10+PE Coating		6		6	6		6
SHELF STANDARD L	R3373-123	A6060S T1.2 L=950MM	4	4	8	8	12	4	8
BOX-HEATER CORD									
BOX-HEATER CORD	R7313-281	SILICON, 115V, 80W, WHITE				2			3
BOX-HEATER CORD	R7313-291	SILICON, 115V, 70W, BLACK	1	2			1	3	
BOX-HEATER CORD	R7313-351	SILICON, 115V, 75W, SILVER			1		1		
DOOR									
DOOR ASSEMBLY	R8172-960	STS430	1		1				
DOOR ASSEMBLY LF	R8279-970	STS430		1		1	1	1	1
DOOR ASSEMBLY RH	R8279-980	STS430		1		1	1	2	2
DOOR GASKET	R3903-570	P-1000,BLACK, RD-PVC	1	2	1	2	2	3	3
DOOR HINGE TOP LF	R8203-050	SM45C		1		1	1	1	1
DOOR HINGE TOP RH	R8203-060	SM45C	1	1	1	1	1	2	2
DOOR HINGE BOTTOM	R3393-370	SM45C	1	1	2	2	2	3	3
DOOR HINGE SHAFT BOTTOM	R3394-400	NICR	1	1	2	2	2	3	3
DOOR HINGE SHAFT TOP	R3394-410	NICR	1	1	2	2	2	3	3
DOOR HINGE WASHER	R3034-020	AL ∅19*T2.2	1	1	2	2	2	3	3
LAMP									
LAMP BULB	R7394-010	25T10/120V 25W	1	1	1	1	2	2	2
LAMP SHIELD	R3813-130	PANLITE PL L-1225L	1	1	1	1	2	2	2
LAMP SOCKET	R7393-020	L-125B 660W 250V	1	1	1	1	2	2	2